

**MINUTES**  
**MISSOURI AIR CONSERVATION COMMISSION**  
**St. Louis Regional Office**  
**7545 South Lindbergh, Suite 220**  
**DESE Conference Room**  
**St. Louis, MO 63125**  
**September 24, 2015**  
**9:00 a.m.**

**Commissioners Present**

Jack Baker, Member\*  
Mark Garnett, Member\*  
Gary Pendergrass, Vice Chairman\*  
David Zimmermann, Chairman

**Staff Members Present**

Larry Archer, Division of Environmental Quality  
Darcy Bybee, Compliance/Enforcement Section Chief, Air Pollution Control Program (APCP)  
Dorothy Franklin, Director, St. Louis Regional Office (SLRO)  
Lori Gale, SLRO  
David Gilmore, Program Secretary, APCP  
Wayne Graf, Air Quality Planning Section, APCP  
Kendall Hale, Permits Section Chief, APCP  
Caroline Kargus, SLRO  
Ashley Keas, Air Quality Planning Section, APCP  
Don Kotur, SLRO  
Mark Leath, Air Quality Planning Section  
Mark Molyneaux, SLRO  
Kyra Moore, Director, APCP  
Julia Katich Mudd, Department of Natural Resources  
Lisa Nahach, Public Information Specialist, APCP  
David Offu, SLRO  
Sara Oliver, SLRO  
Antwane President, SLRO  
Linda Wegrzyn, SLRO  
Emily Wilbur, Air Quality Planning Section, APCP  
Joe Winkelmann, SLRO  
Shirley Wolverson, SLRO

**Others Present by Attendance Record**

Ken Anderson, Ameren  
Jacob Barker, St. Louis Post-Dispatch  
John Bundren, Liuna Training & Apprenticeship  
Michael Coulson, East-West Gateway Council of Governments  
Sandra Cupp, CEC Incorporated

Tim Duggan, Attorney General's Office  
Sara Edgar, Sierra Club  
Tom Flanogan  
Gerry Friedman  
Dana Gvay  
Alicia Harris, Washington University, Environmental Law Clinic  
Diana Haynes, Town of Labadie  
John Hickey, Sierra Club  
Andy Knott, Sierra Club  
David Kuechenmeister  
Veronique LaCapra, St. Louis Public Radio  
Carol Lawrence, East-West Gateway Council of Governments  
Mary Grace Lewandowski, East-West Gateway Council of Governments  
Patricia McHwy  
Ken Miller, Washington University, Environmental Law Clinic  
Caroline Pufalt, SBC Global  
Patricia, Schuba, Labadie Environmental Organization  
Gloria Sennert  
Meredith Springs, Civil and Environmental Consultants Inc.  
Brittney Stephenson, Sierra Club  
Roger Walker, Regulatory Environmental Group for Missouri  
Steven Whitworth, Ameren  
Lisa Zerbe  
Michael Zlatic, St. Louis County Department of Health

**A. Call to Order**

Chairman David Zimmermann called the September 24, 2015, meeting of the Missouri Air Conservation Commission to order. The following commissioners were present: Jack Baker\*, Gary Pendergrass\*, Mark Garnett\* and David Zimmermann.

\*Commissioners Mark Garnett, Jack Baker and Gary Pendergrass participated by phone.

**B. Minutes from August 27, 2015, Meeting**

Commissioner Mark Garnett moved to approve the August 27, 2015, minutes as written. Commissioner Jack Baker seconded the motion, and all commissioners voted to approve the August 27, 2015 minutes as written.

**C. Public Hearing**

Chairman David Zimmermann called the public hearing to order.

Mr. Stan Payne presented 10 CSR 10-6.241, *Asbestos Projects—Registration, Notification and Performance Requirements* and 10 CSR 10-6.250, *Asbestos Projects—Certification, Accreditation and Business Exemption Requirements*. Information on the proposed amendments begin on pages 67 and 81, respectively, of the briefing document.

Commissioner Mark Garnett moved to close the September 24, 2015, public hearing. Commissioner Jack Baker seconded the motion, and all commissioners voted to close the public hearing.

To obtain a copy of the public hearing transcript, please contact Ms. Kathy Porter by writing to Midwest Litigation Services, 711 North 11th Street, St. Louis, MO 63101, or by phone at 1-800-280-3376.

**D. Recommended for Adoption and Actions to be Voted on**

Mr. Mark Leath presented the following State Implementation Plan for adoption: Missouri State Implementation Plan Revision – Infrastructure Elements for the 2012 Annual PM<sub>2.5</sub> Standard. Information on the proposed plan begins on page 99 of the briefing document.

Vice Chairman Pendergrass moved to adopt the following: Missouri State Implementation Plan Revision – Infrastructure Elements for the 2012 Annual PM<sub>2.5</sub> Standard. Commissioner Baker seconded the motion. All of the commissioners voted to adopt the following: Missouri State Implementation Plan Revision – Infrastructure Elements for the 2012 Annual PM<sub>2.5</sub> Standard.

Ms. Ashley Keas presented the following submittal for adoption: Area Boundary Recommendations for the 2010 1-Hour Sulfur Dioxide Standard: July 2016 Designations. Information on the proposed submittal begins on page 101 of the briefing document.

Vice Chairman Pendergrass moved to adopt the following submittal Area Boundary Recommendations for the 2010 1-Hour Sulfur Dioxide Standard: July 2016 Designations. Commissioner Baker seconded the motion. All of the commissioners voted to adopt the Area Boundary Recommendations for the 2010 1-Hour Sulfur Dioxide Standard: July 2016 Designations.

**E. New Business**

Mr. Leath presented the Final Clean Power Plan Rule Overview to the commission. His presentation can be found on Attachment A of these minutes. A color copy of his presentation can be found on the Missouri Air Conservation Commission website: <http://dnr.mo.gov/env/apcp/macc.htm>.

**F. Unfinished Business**

None.

**G. Appeals and Variance Requests**

None.

**H. Reports - The following referenced reports are in the September 24, 2015, Missouri Air Conservation Commission Briefing Document and available online at [dnr.mo.gov/env/apcp/macc.htm](http://dnr.mo.gov/env/apcp/macc.htm).**

**1) COMPLIANCE/ENFORCEMENT REPORT**

Ms. Darcy Bybee stated that the Compliance/Enforcement Report begins on page 13 with the Concern Report. There were a total of 53 concerns received from July 16, 2015 through August 15, 2015. During this time period there were 53 investigations completed.

The Ongoing Negotiations Report can be found on pages 33 and 34. There are 58 enforcement actions in the negotiation process at this time.

The Finalized Agreement Report is on page 35. For the time period of July 16, 2015 through August 15, 2015, the department finalized 7 agreements with a total penalty of \$34,000. Of that amount, \$8,000 was paid to the school fund of the County in which the violation occurred, and the remaining portion was suspended.

The Pending Referrals Report can be found on page 37. At this time, there are 16 Active Referrals. Ms. Bybee said she anticipated having two referrals to report to the commission at the October 29, 2015 meeting.

One case has gone before the Administrative Hearing Commission for an appeal of an open burning administrative penalty order. The final recommendation has not yet been received from the AHC, however, the program anticipates it will be ready for presentation to the Missouri Air Conservation Commission at the October 29, 2015 meeting.

Ms. Bybee also gave an update on the Decommissioning of the Stage II program in St. Louis. As of this week, 85 percent of the facilities subject to the St. Louis vapor recovery rule have gone through the entire Stage II decommissioning, testing and permitting process. The program continues to work with approximately 96 facilities that have not started the process to assist them to meet the December 31, 2015, compliance date.

Mr. Stan Payne has accepted the Asbestos Unit Chief position. He started on Monday, September 21, 2015.

**2) PERMITS REPORT**

Mr. Kendall Hale stated the Permits Report begins on page 39 of the briefing document with the Permit Applications Received Report. A total of 36 construction and 14 operating permit applications were received in August. A grand total of 602 permit applications have been received so far for 2015. A total of 29 construction and 15 operating permits were completed in August. A grand total of 505 permits have been completed so far in 2015.

The Open Permits Report is on page 51 of the briefing document. This report details the types of projects currently open in the Permit Section.

There are currently two operating permit projects on public notice: General Motors in Wentzville and Marshall Municipal Utilities. One Prevention of Significant Deterioration Part 70 operating permit is on public notice for Columbia Municipal Power.

### **3) AIR QUALITY PLANNING REPORT**

#### **a) Rule and State Implementation Plan Agenda**

The Rule and State Implementation Plan Agenda starts on page 53 of the briefing document. Looking ahead to October 29, 2015, meeting, on page 54 of briefing document, the program will have two permit fee change rulemakings for public hearing: 10 CSR 10-6.060 and 6.065 (construction and operating permits) – made available for public review and comment on program’s website on September 15, 2015. Comments will be accepted through close of business on November 5, 2015. Also, it is anticipated that the two asbestos fee order of rulemakings will be presented to the commission for adoption at the October 29, 2015 meeting.

The Rules In Progress Schedule is on page 60 of the briefing document. Two permit fee change rulemakings had “TBD” for adoption dates. These rulemakings are now expected to be adopted at the November 17, 2015 commission meeting.

#### **b) Ozone Updates**

Although some ozone levels increased the last week in August due to high temperatures, there are still no exceedances. Four stations in the Springfield area had the increased levels of ozone. As of today, Missouri should still be on target to have the St. Louis area attain the 2008 ozone standard by end of 2015.

### **4) DIRECTOR’S REPORT**

#### **a) St. Louis Air Quality Partners**

Ms. Moore welcomed the commission to St. Louis. She introduced the staff of the Air Pollution Control Program’s Inspection Maintenance (I/M) section, which is housed in the St. Louis Regional Office (SLRO). This group does a wonderful job responding to all of the inquiries regarding this program. She continuously receives e-mails and phone calls complimenting this group.

Ms. Moore also introduced staff from the SLRO and clean air partners in the St. Louis area from the St. Louis County Department of Public Health and the East-West Gateway Council of Governments.

**b) Clean Power Plan**

The Air Pollution Control Program held a stakeholder meeting for the Clean Power Plan meeting on September 23, 2015. All of the presentations from that meeting and the attendee list are on the Clean Power Plan website: <http://dnr.mo.gov/env/apcp/cpp/index.html>

The Clean Power Plan presentation given by Mr. Leath at the commission meeting is also available, along with the video of today's meeting, on the commission's website at <http://dnr.mo.gov/env/apcp/macc.htm>

**c) Ozone**

The program anticipates the state will comply with the 2008 ozone standard by the end of this year. However, EPA is set to release the new 2015 ozone standard on October 1st. The program will provide an update to the commission about the new ozone standard and how it affects the state of Missouri at the October 29, 2015 meeting.

**d) Future Meetings**

The December 3, 2015 meeting was rescheduled to Tuesday, November 17, 2015 at 10:00 a.m. in the Harry S Truman State Office Building.

Ms. Moore presented the 2016 meeting schedule. Commissioner Mark Garnett moved that the commission meet nine times in 2016. Vice Chairman Gary Pendergrass seconded the motion. All commissioners approved the schedule of nine meetings.

**I. Open Session**

Ms. Patricia Schuba, representing the Labadie Environmental Organization, addressed the commission.

Mr. Tom Flanagan addressed the commission.

**J. Future Meeting Dates**

**October 29, 2015 – Jefferson City**  
Elm Street Conference Center  
1730 East Elm Street  
Lower Level  
Bennett Springs Conference Room  
Jefferson City, MO 65101

**Tuesday, November 17, 2015 – Jefferson City**

Harry S Truman Building  
301 West High Street  
Fourth Floor - Room 400  
Jefferson City, MO 65101

**K. Discussion of Pending Litigation and Legal Matters**

None.

**L. Missouri Air Conservation Commission**

Commissioner Baker moved to adjourn the September 24, 2015, Missouri Air Conservation Commission meeting. Commissioner Garnett seconded the motion, and all commissioners voted to adjourn the meeting.

Chairman Zimmermann adjourned the September 24, 2015, Missouri Air Conservation Commission meeting.

Respectfully submitted,

*Signature on file*

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Kyra L. Moore, Director  
Air Pollution Control Program

Approved:

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David Zimmermann, Chairman  
Missouri Air Conservation Commission







## Clean Power Plan - Final Rule Overview

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Mark Leath, PE

Prepared for -  
Missouri Air Conservation Commission  
September 24, 2015



## Presentation Overview

- Background
  - Federal regulations to control CO<sub>2</sub> from power plants
- Clean Power Plan Overview
- Clean Power Plan final vs. proposal
- Final Clean Power Plan goals for Missouri
- Compliance options and plan approaches
- Timeline

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## EPA Actions on August 3, 2015

EPA released two final rules and one proposed rule to control CO<sub>2</sub> emissions from power plants

- Two final rules
  - CO<sub>2</sub> emission standards for new power plants - 111(b)
  - CO<sub>2</sub> emission standards for existing power plants - 111(d)
- One proposed rule
  - Proposed Model rules for existing plants - 111(d)
  - Proposed Federal Plan for existing plants - 111(d)

AKA – Clean Power Plan

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## Clean Power Plan - Overview

- The Clean Power Plan sets CO<sub>2</sub> emissions performance rates for existing power plants that reflect the “best system of emission reduction” (BSER)
- EPA identified 3 “Building Blocks” as BSER and calculated nationally consistent performance rates for fossil fuel-fired electric steam generating units and another for natural gas combined cycle units
- EPA translated the performance rates into mass-based and rate-based state goals using each state’s unique mix of power plants in 2012
- The rule establishes guidelines for states to develop plans that require existing power plants to achieve either the performance rates directly or one of the state goals

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## 21 Affected Missouri Sources Identified in Final CPP Rule

Plants highlighted in red have affected unit(s) with announced retirement and/or plans to switch to natural gas

Plant Name	Owner/Operator
Labadie <b>Meramec</b> Rush Island Sioux	Ameren (Union Electric Company)
New Madrid St Francis Energy Facility Thomas Hill	Associated Electric Cooperative, Inc.
<b>Chamois</b>	Central Electric Power Cooperative and Associated Electric Cooperative, Inc.
Sikeston Power Station	City of Carthage, Sikeston Bd. of Municipal Utilities, City of Fulton, and City of Columbia
Columbia	City of Columbia
James River Power Station John Twitty Energy Center	City of Springfield, MO
Dogwood Energy Facility	Dogwood Energy, LLC and North American Energy Services
Asbury State Line Combined Cycle	Empire District Electric Company
Iatan	Empire District Electric Company, KCP&L, KCP&L GMO, and Missouri Joint Municipal Electric Utility Commission
<b>Blue Valley</b>	Independence Power and Light
Hawthorn <b>Montrose</b>	KCP&L
<b>Lake Road</b> <b>Sibley</b>	KCP&L GMO

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## CPP Comparison: Final vs. Proposal

- Compliance timeframe: starts in 2022 (2020)
- Building Blocks and State Goals have changed
  - Consistent National Performance Rates
- Existing RE and Nuclear no longer compliance options
- Deadlines for state plans September 2016 with option for two-year extension September 2018.
- “Trading Ready” approaches
- Clean Energy Incentive Program (CEIP) provides incentive for early action

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## Missouri's Proposed vs. Final Rule Rate Comparison

Step	Proposed Rate (lbs CO <sub>2</sub> /MWh)	Step	Final Rate (lbs CO <sub>2</sub> /MWh)
Starting rate 2012 statewide adjusted average emission rate	1,963		2,008
Interim Period 2020-2029	1,621 ↓ 17%	Interim step 1 2022-2024	1,621
		Interim step 2 2025-2027	1,457
		Interim step 3 2028-2029	1,342
		Average Interim Goal	1,490 ↓ 26%
Final	1,544 ↓ 21%		1,272 ↓ 37%

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## Building Blocks Used to Set the Standards

<b>1.</b>	<b>Coal Plants – Heat Rate Improvements</b>	<ul style="list-style-type: none"> <li>Applied Regionally</li> <li>Eastern Region</li> <li>4.3% Improvement</li> </ul>
<b>2.</b>	<b>Redispatch to NGCC</b>	<ul style="list-style-type: none"> <li>Applied Regionally</li> <li>Phased in</li> <li>75% of Net Summer Capacity</li> </ul>
<b>3.</b>	<b>Renewables <del>&amp; Nuclear</del> *</b>	<ul style="list-style-type: none"> <li>No Nuclear</li> <li>Incremental RE only</li> <li>Based on Historical RE Penetration Levels</li> </ul>
<b>4.</b>	<b><del>Demand-Side Energy Efficiency</del> *</b>	<ul style="list-style-type: none"> <li>No Demand-Side EE</li> </ul>

\* Demand-Side Energy Efficiency and New Nuclear are still allowable compliance options.

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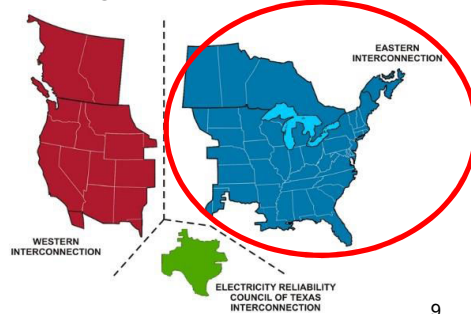
## Consistent National Performance Standards

- EPA divided the country into three regional interconnects and applied the building blocks to each
- The resulting performance standards from the least stringent region were used as the nationwide performance standards

**Nationwide  
Performance Standards**

EGU Type	2030 Rate (lbs CO <sub>2</sub> /MWh)
Fossil Steam	1,305
NGCC	771

**Regional Interconnect Grids**

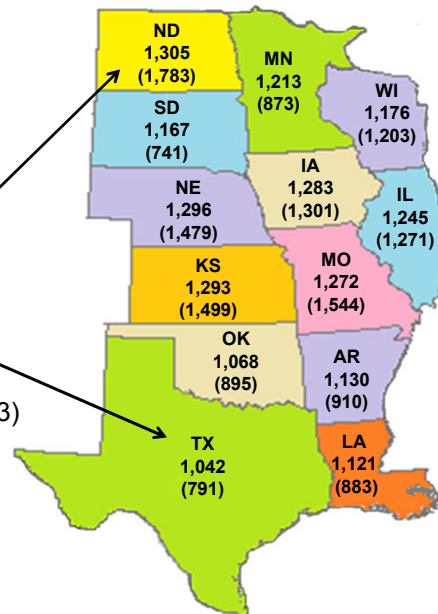


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## Mid-U.S. 2030 CPP Rate-Goals Final vs. (Proposal)

**Mid-U.S. Range (ND and TX)**

**Proposed Rule Range: (791 – 1,783)**  
**Final Rule Range: (1,042 – 1,305)**



Note: All goals are listed in units of lbs CO<sub>2</sub>/MWh

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## Missouri's Final Clean Power Plan Goals

Timeframe	Rate Based Goals	Mass-Based Goals (without new units)	Mass-Based Goals (with new units)
	CO <sub>2</sub> Rate (lbs/Net MWh)	CO <sub>2</sub> Emissions (Short Tons)	CO <sub>2</sub> Emissions (Short Tons)
<b>2012 Actuals</b>	<b>2,008</b>	<b>78,039,449</b>	
Interim Step 1 2022-2024	1,621	67,312,915	67,587,294
Interim Step 2 2025-2027	1,457	61,158,279	62,083,903
Interim Step 3 2028-2029	1,342	57,570,942	58,445,482
<b>Interim Average (2022 – 2029)</b>	↓26% <b>1,490</b>	↓19% <b>62,569,433</b>	<b>63,238,070</b>
<b>Final Goals (2030 and beyond)</b>	↓37% <b>1,272</b>	↓28% <b>55,462,884</b>	<b>56,052,813</b>

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## Available Compliance Options

- Three Building Blocks:
  - Improve efficiency at existing plants
  - Redispatch coal to existing NGCC
  - Increase renewable energy
- Other options:
  - Demand-side EE
  - New nuclear/upgrades to existing nuclear
  - Combined Heat & Power
  - Biomass
  - Natural gas co-firing/convert to natural gas
  - Transmission & distribution improvements
  - Energy storage improvements
  - Retire older/inefficient power plants
  - Trading

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## State Plan Approaches

- Choose form of the compliance goal
  - Rate-based: (lbs CO<sub>2</sub>/MWh)
    - Performance rates, statewide rate-goal, or state-defined rates
  - Mass-based: (tons CO<sub>2</sub>)
    - Include or Exclude new units
    - State measures option
- Different plan elements required depending on plan approach
- Interstate trading ability is affected by plan approach

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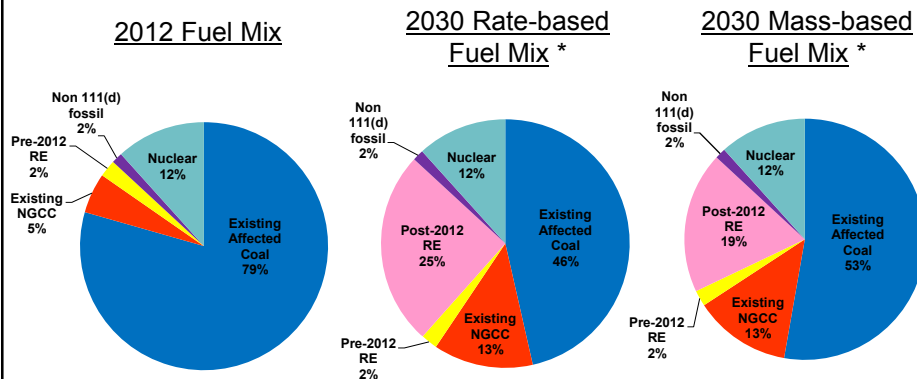
## Rate-Based Approach (overview)

- Requires compliance with a rate:  $\left(\frac{\text{lbs CO}_2}{\text{MWh}}\right)$
- Emission Rate Credits (ERCs) are generated (ex-post) through EE/RE and other compliance options
  - 1 ERC = 1 MWh with 0 CO<sub>2</sub> emissions
  - EM&V plan required for all ERC generation
- ERCs are added to each source's denominator to lower their rate
- ERCs may be banked for future years or traded/sold among individual sources
- New units are not subject and cannot generate ERCs

## Mass-Based Approach (overview)

- Traditional regulatory trading approach
  - Examples:  
Acid Rain, NO<sub>x</sub> Budget Program, CAIR, CSAPR
- State-wide annual budget of allowances (tons CO<sub>2</sub>)
  - (Emissions are capped)
- Allowances are allocated to individual sources
  - Each allowance permits one ton of emissions
  - Allowances may be banked for future years or traded/sold among individual sources
- Plan must address emission leakage to new units

## Fuel Mix Comparisons



\* 2030 fuel mixes are estimates and could vary significantly based on compliance options selected.

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## Clean Energy Incentive Program (CEIP)

- States award CEIP allowances/ERCs to eligible projects and EPA matches the award
  - Renewable Energy
  - Energy Efficiency in low-income communities
- To be eligible
  - Construction (RE) or implementation (EE) must begin after the State submits final plan
  - Generation (RE) or savings (EE) must occur in 2020 and/or 2021 (EM&V plan required)
- State participation is optional

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## Outreach and Coordination

- DNR plans to engage with numerous stakeholders throughout plan development
  - State Energy Office and Public Service Commission
  - Affected sources
  - ISOs/RTOs (Electricity Grid Operators)
  - EE/RE developers
  - Public engagement; particularly vulnerable communities
    - General outreach, EE/RE education, CEIP opportunities
- 30-day public comment periods for both Initial and/or Final Plans

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## Clean Power Plan - Missouri Timeline \*

Tentative Date	Milestone
<b>August 3<sup>rd</sup>, 2015</b>	Final Clean Power Plan Released by EPA
<b>July of 2016</b>	Public Hearing for Initial Submittal/Extension Request
<b>August of 2016</b>	Adoption for Initial Submittal/Extension Request
<b>September 6<sup>th</sup>, 2016</b>	Initial Submittal Deadline
<b>August of 2017</b>	MACC Adoption of 2017 CPP Progress Report
<b>September 6<sup>th</sup>, 2017</b>	2017 CPP Progress Report Submittal Deadline
<b>April of 2018</b>	Public Hearing for Final Plan
<b>May of 2018</b>	Adoption of Final Plan
<b>September 6<sup>th</sup>, 2018</b>	Final Plan Submittal Deadline
<b>January 1<sup>st</sup>, 2022</b>	Interim Compliance Period Begins
<b>January 1<sup>st</sup>, 2030</b>	Final Compliance Period Begins

\* This timeline is tentative and gives the maximum time allowed to meet a Final Plan submittal deadline of September 6<sup>th</sup>, 2018. The actual schedule for plan development and adoption may be faster. 19

Division of Environmental Quality Director: Leanne Tippet Mosby

Date: 9/24/15

Nothing in this document may be used to implement any enforcement action or levy any penalty unless promulgated by rule under chapter 536 or authorized by statute.